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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,406	02/09/2004	Dallas W. Meyer	15796.3.1	8897

22913 7590 12/13/2005

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EXAMINER

HABERMEHL, JAMES LEE

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/775,406

Applicant(s)

MEYER, DALLAS W.

Examiner

James L. Habermehl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2004 and 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 9-15, 22-25 and 29-35 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 26-28 is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-35 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12 Oct 04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-8, 16-21, and 26-28, drawn to calibrating transducer vertical motion using transducer resistance values affected by magnetic medium surface ridges, classified in class 360, subclass 75.
  - II. Claims 9-15, 22-25, and 29-35, drawn to calibrating transducer lateral motion using transducer voltages affected by reproducing magnetic medium bits, classified in class 360, subclass 77.02.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as in a magnetic disk drive that calibrates transducer vertical motion by using the harmonic ratio flyheight (HRF) method. See MPEP § 806.05(d).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Kevin W. Stinger on 2 December 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8, 16-21, and 26-28. Affirmation of this election must be made by applicant in replying to this

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Office action. Claims 9-15, 22-25, and 29-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. Suzuki et al. Figures 1A-1B, 4-5, 11, and 19 meet all the limitations of the claims, where the transducer vertical movement is effected by controlling the rotation of the disk.

7. Claims 1-8 and 26-28 are allowed over the prior art of record. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1 and 26 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of calibrating the motion of a transducer in a magnetic storage device comprising positioning the transducer at a first vertical position and determining an infinite resistance value, contacting the medium surface with the transducer at a second vertical position and determining a contact resistance value, and iteratively adjusting the transducer body to position the transducer between the first and second vertical positions while passing over a plurality of ridges on the surface and measuring a resistance value for each iteration, as presented in the environment of claims 1 and 26. It is

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noted that the closest prior art, Li et al., shows a method of calibrating the motion of a transducer in a magnetic storage device similar to applicant's invention. However, Li et al. fails to disclose positioning the transducer at a first vertical position and determining an infinite resistance value, contacting the medium surface with the transducer at a second vertical position and determining a contact resistance value, and iteratively adjusting the transducer body to position the transducer between the first and second vertical positions while passing over a plurality of ridges on the surface and measuring a resistance value for each iteration as claimed.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith, Smith et al., Egan et al., Abraham et al., Ottesen et al., Baumgartner et al., Brannon et al., Xuan et al., and Baumgart et al. are examples of flyheight calibration methods similar to applicant's invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James L. Habermehl whose telephone number is (571)272-7556. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571)272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Habermehl/jlh  
6 Dec 05



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